# Request to Archive
# With The National Centers for Environmental Information
# For DMSP Space Weather Data from AFRL
# Provided by AFRL

## 2014-03-03

This information will be used by NCEI to conduct an appraisal and make a decision on the request.

**1. Who is the primary point of contact for this request?**

Rob Redmon
NGDC
Space Physicist
303-497-4331
Rob.Redmon@noaa.gov

**2. Name the organization or group responsible for creating the dataset.**

AFRL

**3. Provide an overview summarizing the scope of data you want to archive. Describe the outputs, data variables, including their measurement resolution and coverage.**

This request covers the DMSP space weather data as provided from AFRL to NGDC. This includes these instrument suites:

SSIES - Special Sensor Ions Electrons and Scintillation

Includes these instruments:

Retarding Potential Analyzer (RPA)

4-second averages of density, composition, temperature, ram velocity

Format: binary, ASCII, CDF

Ion Drift Meter (IDM)

1-second averages of vector plasma velocity in s/c coordinates

Format: binary, ASCII, CDF

Scintillation Meter (SM)

4-second averages of total ion density

Format: binary, ASCII, CDF

SSJ - Special Sensor J

1-second measurements of precipitating electron and ion count rates

Format: binary, CDF

SSM - Special Sensor Magnetometer

1-second measurements of vector magnetic field in s/c coordinates and difference between measured and IGRF modeled field

Format: ASCII (full field measured), binary (measured - modeled), CDF

**4. What is the time period covered by the dataset? (YYYY-MM-DD, YYYY-MM or YYYY)**

From 1982-01-01

Ongoing as continuous updates to the data record

**5. Edition or version number(s) of the dataset:**
1) Original ASCII, Binary; 2) v2 CDFs

**6. Describe the level to which the data are processed. For example, are these unprocessed raw observations, derived parameters, quality controlled or inter-calibrated data, etc.?**
SSIES - processed L1b data in engineering units (cm^-3, m/s)
SSJ - raw count rates to fluxes (eV/cm2/s/ster/deV)
SSM - processed L1b data in engineering units (nano-Tesla)

**7. Approximate date when the dataset was or will be released to the public:**
2000-01-01

**8. Who are the expected users of the archived data? How will the archived data be used?**
Space Physics community: government and academic labs and institutions.

**9. Has the dataset undergone user evaluation and/or an independent review process? Did NCEI participate in design reviews?**
Data are heavily used by research community.

**10. Describe the dataset's relationship to other archived datasets, such as earlier versions or related source data. If this is a new version, how does it improve upon the previous version(s)?**

**11. List the input datasets and ancillary information used to produce the data.**
SSIES - QC algorithm from UTD
SSJ - Calibration factors from AFRL
SSM - IGRF

**12. List web pages and other links that provide information on the data.**
non-CDF files: No or limited granule level metadata.

CDF files: NASA/SPDF ISTP Compliant

**13. List the kinds of documents, metadata and code that are available for archiving. For example, data format specifications, user guides, algorithm documentation, metadata compliant with a standard such as ISO 19115, source code, platform/instrument metadata, data/process flow diagrams, etc.**
1. Documentation:
   http://www.ngdc.noaa.gov/stp/satellite/dmsp/docs/

**14. Indicate the data file format(s).**
1. CDF
2. CSV
3. Bit Packed Binary

**15. Are the data files compressed?**
gzip

**16. Provide details on how the files are named and how they are organized (e.g., file_name_pattern_YYYYMM.tar in monthly aggregations).**

SSIES - all daily files
e.g.:
f13dm99jan01.dat.gz
f13mp99jan14.dat.gz
f13sm99jan05.dat.gz
PS.CKGWC_SC.U_DI.A_GP.SIES3-F18-R99990-B9999090-APGA_AR.GLOBAL_DD.20140201_TP.000001-235959_DF.EDR.gz
dmsp-f16_ssj_bulk-plasma_20100101_v01c.cdf

SSJ - all daily files
e.g.:
j5f1814032.gz
dmsp-f16_ssj_precipitating-electrons-ions-afrl_20100101_v01c.cdf

SSM - all daily files
e.g.:
PS.CKGWC_SC.U_DI.A_GP.SSMXX-F18-R99990-B9999090-APSM_AR.GLOBAL_DD.20140201_TP.000001-235958_DF.MFR.gz
m1814032.dat.gz
dmsp-f16_ssm_magnetic-field_20100101_v01c.cdf

**17. Explain how to access sample data files and/or a file listing for previewing. If it is not available now, when will it be available?**

http://www.ngdc.noaa.gov/stp/satellite/dmsp/

**18. What is the total data volume to be submitted?**

**Historic Data: all historic data or data submitted as a completed collection.**

| | |
|---|---|
| Total Data Volume: | 1TB |
| Number of Data Files: | 270000 |

**Continuous Data: data volume rate for a continuous data production.**

| | |
|---|---|
| Total Data Volume Rate: | 110GB per Year |
| Data File Frequency: | 7300 per Year |
| Data Production Start: | 2014-06-01 |

**19. Are later updates, revisions or replacement files anticipated? If so, explain the conditions for submitting these additional data to the archive.**

CDFs will be version controlled within the archive. It is anticipated that every few years, community expert recommendations may warrant reprocessing.

**20. Describe the server that will connect to the ingest server at NCEI for submitting the data.**

| | |
|---|---|
| Physical Location: | Boston College |
| System Name: | Kevin Marten |
| System Owner: | Boston College |

Additional Information:

**21. What are the possible methods for submitting the data to NCEI? Select all that apply.**

1. FTP PUSH

**22. Identify how you would like NCEI to distribute the data. Web access support depends on the resources available for the dataset.**

1. User interface to order and stage data for download
2. Direct download links
3. Advanced web services (e.g., THREDDS Catalog Service)

**23. Will there be any distribution, usage, or other restrictions that apply to the data in the archive?**

No known constraints apply to the data.

**24. Discuss the rationale for archiving the dataset and the anticipated benefits. Mention any risks associated with not archiving the dataset at NCEI.**

NGDC is the only public archive of these data. Other DMSP sensors are being archived (e.g. EOG).

**25. Are the data archived at another facility or are there plans to do so? Please explain.**

No

**26. Is there an existing agreement or requirement driving this request to archive? Have you already contacted someone at NCEI?**

MOA/U between AFWA and NGDC; need to confirm agreement type with WFD.

**27. Do you have a data management plan for your data?**

No

**28. Have funds been allocated to archive the data at NCEI?**

No

**29. Identify the affiliated research project, its sponsor, and any project/grant ID as applicable.**

N/A

**30. Is there a desired deadline for NCEI to archive and provide access to the data?**

Archive by: 2014-12-31

Accessible by:

**31. Add any other pertinent information for this request.**

None